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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,532

12/05/2003

Mark E. Rodgers

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EXAMINER

KOSOWSKI, ALEXANDER J

ART UNIT

PAPER NUMBER

2125

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/729,532

Applicant(s)

RODGERS, MARK E.

Examiner

Alexander J. Kosowski

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 75-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 75-77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

- 1) Claims 1-15 and 75-77 are presented for examination in light of the response and RCE filed 2/1/07.

Claim Rejections - 35 USC § 112

- 2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3) Claim 9 recites the limitation "the appliance" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

- 4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 5) Claims 8 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable by Horst et al (U.S. PGPUB 2003/0233201), further in view of Mason, JR. et al (U.S. PGPUB 2004/0113810).

Referring to claim 8, Horst teaches a method for energy management, comprising: sending an energy rate request message from an appliance, the appliance controlling load activation, and receiving an energy rate schedule at the appliance utilizing a communication link (Paragraphs 0030 and 0038 and 0043 and 0049, whereby energy providers may send pricing schedules to a community controller, and controller controls load activation), receiving an energy rate schedule at the appliance, the energy rate schedule comprising a first time period for a first usage rate and a second time period for a second usage rate (Paragraphs 0039 and 0043 and 0058

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and 0068, whereby pricing structures are communicated to and stored by the controller, and the controller may communicate with a community controller) and determining in the appliance whether to activate a power load based in part on the energy rate schedule (Paragraphs 0049-0054 and 0057 and 0060, whereby connected appliances may be activated or deactivated based on pricing information). In addition, Horst teaches that wireless signals may allow access to the system from remote locations (Paragraphs 0061-0062). However, Horst does not explicitly teach that the request message is communicated using a wireless communication link, the wireless communication link relaying the message through at least one other appliance.

Mason teaches an energy management system comprising groups of intelligent power meters located at various sites which communicate wirelessly not only with a remote host utility company but also with other local meters, and have the ability to transmit data and messages wirelessly between themselves or through each other to reach the remote host utility company (Paragraphs 0008 and 0024 and Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to communicate messages wirelessly by relaying the messages through at least one other appliance in the invention taught by Horst above since this would allow the use of lower-cost controllers which do not all have to communicate directly with a utility's central server (Mason, Paragraphs 0005-0006).

Referring to claim 76, Horst teaches the above. However, Horst does not explicitly teach that the distribution network transmits the rating data wirelessly using an 802.15.4-based communications link.

Mason teaches an energy management system comprising groups of intelligent power meters located at various sites which communicate wirelessly not only with a remote host utility company but also with other local meters, and have the ability to transmit data and messages wirelessly between themselves or through each other to reach the remote host utility company utilizing 802.11 protocols (Paragraphs 0008 and 0024 and Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit the rating data wirelessly using an 802.15.4-based communications link in the invention taught by Horst above since a wireless transceiver allows communication between an electronic controller and a computer, and since 802.11 is a well known alternative to several types of networking protocols (Mason, Paragraph 0008).

6) Claims 1-7, 9-15, 75, 77 are rejected under 35 U.S.C. 103(a) as being unpatentable by Horst et al (U.S. PGPUB 2003/0233201), further in view of Mason, JR. et al (U.S. PGPUB 2004/0113810), further in view of Davis et al (U.S. Pat 6,167,389).

Referring to claim 1, Horst teaches a method for energy management comprising: receiving energy rating data at an on-premise processor transmitted by a distribution network from a host processor and storing the energy rating data in a memory, the rating data including a schedule pertaining to time and energy costs (Paragraphs 0030 and 0038 and 0043, whereby energy providers may send pricing schedules to a community controller), receiving at the on-premise processor a message from a power load controller requesting energy rating data and retrieving the energy rating data from the memory and sending a response message including the energy rating data from the on-premise processor to the power load controller (Paragraphs 0039

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and 0043 and 0058 and 0068, whereby pricing structures are communicated to and stored by the controller, and the controller may communicate with a community controller); and determining in the power load controller whether to generate an activation signal based at least in part on the energy rating data (Paragraphs 0049-0054 and 0057 and 0060, whereby connected appliances may be activated or deactivated based on pricing information). In addition, Horst teaches that wireless signals may allow access to the system from remote locations (Paragraphs 0061-0062). However, Horst does not explicitly teach that messages are communicated using a wireless communication link, the wireless communication link relaying the message through at least one other power load controller. Horst also does not explicitly teach that an end device requests and receives the energy rating data and controls load activation itself.

Mason teaches an energy management system comprising groups of intelligent power meters located at various sites which communicate wirelessly not only with a remote host utility company but also with other local meters, and have the ability to transmit data and messages wirelessly between themselves or through each other to reach the remote host utility company (Paragraphs 0008 and 0024 and Figure 1).

Davis teaches an energy management system whereby end devices request and receive pricing tier energy information and control load activations accordingly (col. 2 line 61 through col. 3 line 10), and whereby energy rating data is sent over wireless communications channels (col. 6 lines 1-14).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to communicate messages wirelessly by relaying the messages through at least one other power load controller in the invention taught above since this would allow the use of

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lower-cost controllers which do not all have to communicate directly with a utility's central server (Mason, Paragraphs 0005-0006).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have an end device request and receive the energy rating data and control load activation in the invention taught above since this would encourage the lower usage of power during higher usage times (Davis, col. 9 lines 20-22), which examiner notes would ease the load on the utility and provide cost savings.

Referring to claim 2, Horst teaches that the activation signal activates a power load (Paragraph 0037).

Referring to claim 3, Horst teaches that the activation signal may activate a power generator (Paragraph 0048).

Referring to claim 4, Horst teaches that the energy rating data further comprises a first time period associated with a first usage rate and a second time period associated with a second usage rate (Paragraphs 0038 and 0043, whereby rate schedules and pricing structures are sent)

Referring to claim 5, Horst teaches that the power load controller determines whether to activate the power load based further at least in part on the current time (Paragraphs 0059-0060). However, Horst does not explicitly teach that the end devices determine when to activate the power load.

Davis teaches an energy management system whereby end devices request and receive pricing tier energy information and control load activations accordingly (col. 2 line 61 through col. 3 line 10).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have an end device control load activation in the invention taught above since this would encourage the lower usage of power during higher usage times (Davis, col. 9 lines 20-22), which examiner notes would ease the load on the utility and provide cost savings.

Referring to claims 6-7, Horst teaches the above. However, Horst does not explicitly teach that the distribution network transmits the rating data wirelessly using an 802.15.4-based communications link.

Mason teaches an energy management system comprising groups of intelligent power meters located at various sites which communicate wirelessly not only with a remote host utility company but also with other local meters, and have the ability to transmit data and messages wirelessly between themselves or through each other to reach the remote host utility company utilizing 802.11 protocols (Paragraphs 0008 and 0024 and Figure 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit the rating data wirelessly using an 802.15.4-based communications link in the invention taught above since a wireless transceiver allows communication between an electronic controller and a computer, and since 802.11 is a well known alternative to several types of networking protocols (Mason, Paragraph 0008).

Referring to claim 9, Horst teaches storing the energy rate schedule in a memory in the appliance (Paragraph 0043, whereby the controller inherently utilizes memory to store data).

Referring to claim 10, Horst teaches a method for energy management comprising: receiving at an on-premise processor a first request from a power load controller pertaining to energy rating data, sending from the on-premise processor a second request message over a

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distribution network to the host processor, the second request message pertaining to energy rating data (Paragraphs 0030 and 0038 and 0043, whereby energy providers may send pricing schedules to a community controller) and receiving at the on-premise processor a first rating response message over the distribution network from the host processor, the first rating response message including energy rating data and sending from the on-premise processor to the power load controller a second rating response message, the second rating response message including the energy rating data (Paragraphs 0039 and 0043 and 0058 and 0068, whereby pricing structures are communicated to and stored by the controller, and the controller may communicate with a community controller) and determining in the power load controller whether to generate an activation signal based at least in part on the energy rating data (Paragraphs 0049-0054 and 0057 and 0060, whereby connected appliances may be activated or deactivated based on pricing information). In addition, Horst teaches that wireless signals may allow access to the system from remote locations (Paragraphs 0061-0062). However, Horst does not explicitly teach that messages are communicated using a wireless communication link, the wireless communication link relaying messages through at least one other power load controller. Horst also does not explicitly teach that an end device requests and receives the energy rating data and controls load activation itself.

Mason teaches an energy management system comprising groups of intelligent power meters located at various sites which communicate wirelessly not only with a remote host utility company but also with other local meters, and have the ability to transmit data and messages wirelessly between themselves or through each other to reach the remote host utility company (Paragraphs 0008 and 0024 and Figure 1).

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Davis teaches an energy management system whereby end devices request and receive pricing tier energy information and control load activations accordingly (col. 2 line 61 through col. 3 line 10), and whereby energy rating data is sent over wireless communications channels (col. 6 lines 1-14).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to communicate messages wirelessly by relaying the messages through at least one other power load controller in the invention taught by Horst above since this would allow the use of lower-cost controllers which do not all have to communicate directly with a utility's central server (Mason, Paragraphs 0005-0006).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have an end device request and receive the energy rating data and control load activation in the invention taught above since this would encourage the lower usage of power during higher usage times (Davis, col. 9 lines 20-22), which examiner notes would ease the load on the utility and provide cost savings.

Referring to claims 11-12, see rejection of claims 2-3 above.

Referring to claims 13-14, see rejection of claims 4-5 above.

Referring to claim 15, Horst teaches that the power load activated is an air conditioning or heating load (Paragraph 0037).

Referring to claims 75 and 77, see rejection of claim 7 above.

Response to Arguments

7) Applicants arguments with regards to independent claims 1 and 10 are moot in view of the new rejection above, necessitated by amendment.

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With regard to independent claim 8, examiner notes that no specific arguments have been directed towards this claim in the response filed 2/1/07. Rather, arguments appear to address claim 1, and the aspects of an “end device”. Examiner notes that claim 8 is directed towards an “appliance”, not an “end device”. As currently amended, examiner notes that the “appliance” of claim 8 can still be broadly interpreted as a type of controller, as taught by Horst. The controller in Horst is clearly capable of controlling load activation. Therefore, referring to claim 8, examiner maintains the rejection above with Horst et al in view of Mason, Jr.

Conclusion

8) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cumming et al (U.S. PGPUB 2005/0065743) – teaches the use of a mesh network of meters for communication.

Conclusion

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. In addition, the examiner's RightFAX number is 571-273-3744.

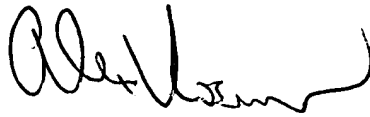
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

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Alexander J. Kosowski
Primary Examiner
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A handwritten signature in black ink, appearing to read 'Alex Kosowski', with a stylized, flowing script.